3-month, estimated, direct cost savings for treatment with GEn ranged from $94.40 to $202.80. Similarly, the per-patient indirect cost savings due to improved work productivity ranged from $1447.30 to $2587.60. Thus, total 3-month cost savings ranged from $1541.70 to $2790.40. **CONCLUSIONS:** Based on these findings, the estimated annual total treatment cost savings with GEn is approximately $6,000 to $11,000 per patient.

PND5

COMPARISON OF DIRECT AND INDIRECT COSTS IN EMPLOYEES WITH PAINFUL DIABETIC PERIPHERAL NEUROPATHY TREATED WITH PREGABALIN OR DULOXETINE

Margolis J[1], Cao Z[2], Fowler R[3], Harnett J[4], Silverman SL[5]
[1]Thomson Reuters, Bala Cynwyd, PA, USA, [2]Thomson Reuters, Cambridge , MA, USA, [3]Thomson Reuters, Washington, DC, USA, [4]Pfizer, New York, NY, USA, [5]Cedars-Sinai/UCLA, Beverly Hills, CA, USA

OBJECTIVES: To evaluate the effects on direct and indirect costs of initiating pregabalin or duloxetine in employees diagnosed with painful diabetic peripheral neuropathy (pDPN). **METHODS:** Employees (18–64 years old) with a diagnosis of DPN and at least one claim for a pDPN-related pain medication were identified using the Thomson Reuters MarketScan® Commercial Claims and Encounters Research Database (2005–2008). Patients were continuously enrolled in the 6-month pre- and 6-month post-initiation periods. To control for selection bias, propensity scored matched pregabalin and duloxetine new starts were evaluated. Key study outcomes including imputed medically-related work loss, prescription and health care utilization, and associated expenditures were analyzed using bivariate statistics and multivariate models in a difference-in-difference approach. **RESULTS:** A total of 946 employees with pDPN (473 per group) were identified. In the pre-index period, there were no statistically significant differences between groups in age (mean 54.0 ± 5.6 pregabalin and 53.3 ± 7.5 duloxetine), gender (females 52% pregabalin, 48% duloxetine), geographic distribution, insurance plan types, comorbidities, medication use, health care resource utilization or health care expenditures. The average number of prescriptions in the 6-month post-index period was 2.9 ± 1.9 for pregabalin and 3.1 ± 2.1 for duloxetine. There were no significant differences between treatment groups for pre-to-post changes in opioid utilization (marginal effect 1.3 percentage points fewer pregabalin opioid patients, $p = 0.328$) as well as the number of pDPN-related pain medications (marginal effect 0.108 more medications for pregabalin, $p = 0.506$). The adjusted marginal effects for pre-to-post changes in all-cause health care expenditures ($154 greater increase for pregabalin patients, $p = 0.895$), pDPN-attributable expenditures ($145 greater increase for pregabalin patients, $p = 0.359$) and indirect costs ($458 relative decrease for pregabalin patients, $p = 0.324$) were not statistically significant. **CONCLUSIONS:** There were no significant pre-to-post differences between pregabalin and duloxetine treatment groups in opioid use, DPN-related pain medication use, pDPN-attributable, all-cause and indirect expenditures.

PND6

MODELING THE ESTIMATED COST-SAVINGS OF STRATIFIED CARE FOR MIGRAINE HEADACHES FROM A U.S. PERSPECTIVE

Furiak N, Bansal M
Medical Decision Modeling Inc., Indianapolis, IN, USA

OBJECTIVES: To estimate the differences in costs of treating migraine headaches employing a stratified care (STRAT) approach versus the more common stepped care (STEP) using MIDAS scores in the U.S. STRAT using MIDAS scores has been shown to be cost-effective in other settings. However, STRAT is not widely used in the U.S. In this study, a published decision model was adapted to the U.S. setting and the differences in costs were evaluated for STEP and STRAT in the U.S. by differentiating the patients by MIDAS scores. **METHODS:** Published values for costs of physician/specialist visits, over the counter (OTC) analgesics, aspirin+metoclopramide (AM), triptans, and hospitalizations were used to create a microsimulation model for a U.S. perspective. Therapy effectiveness for OTCs, AM, and triptans by MIDAS scores I, II, and III were taken from the published decision tree. In the base-case the proportion of MIDAS I, II, and III patients were 5%, 25%, and 70% respectively. STEP patients were forced through each phase of therapy regardless of MIDAS score. STRAT patients were moved ahead to advanced phases of therapy given higher MIDAS score. In the model, a sample of 1000 patients is taken and is distributed according to the MIDAS scores. The costs are attached to each node of the treatment algorithm to obtain the total costs. **RESULTS:** Base case results showed that mean annual direct medical costs on STEP for the population were $1229 compared to $1088 for STRAT. Sensitivity analysis showed that the differences in costs (STEP-STRAT) were $210 for a cohort of MIDAS II patients and $142 for a cohort of MIDAS III patients. **CONCLUSIONS:** Model results indicate that STRAT has the potential for cost savings in a U.S. setting. Increased awareness and used of STRAT can benefit patients, providers, and payers in the treatment of migraine headache.

PND7

THE IMPACT OF SPECIALTY PHARMACY PARTICIPATION ON HEALTH CARE COSTS IN A MULTIPLE SCLEROSIS POPULATION USING BIOLOGIC DMD THERAPY

Faris RJ[1], Steinberg SC[2], Bolton C[1]
[1]Accredo Health, Memphis, TN, USA, [2]Accredo Health and the University of Memphis, Memphis, TN, USA

OBJECTIVES: To determine if the pharmacy provider model for patients with relapsing remitting multiple sclerosis (MS) on biologic disease modifying drugs (DMD) impacts medical costs. **METHODS:** A retrospective cohort study design was used. Pharmacy and medical claims data for MS patients (N = 5,232) were extracted for 2008 from a pharmacy benefit management (PBM) company. The two study populations included: 1) patients who received therapy from a specialty pharmacy, and 2) those who received therapy from retail pharmacies. Adherence was measured using a Medication Possession Ratio (MPR), with patients considered adherent for MPR ≥ 80%. Nonparametric statistical tests and multivariate log-linear regression analyses were used to determine differences between the two populations. **RESULTS:** The results suggest that MS patients receiving therapy from a specialty pharmacy have significantly lower total medical costs than patients who receive therapy from a retail pharmacy [–0.18; 95% CI –0.33, –0.02]. Overall, specialty pharmacy MS patients tended to have lower total medical costs, IP costs and office visits as compared to retail patients. **CONCLUSIONS:** DMD therapy is considered an effective treatment for relapsing-remitting MS patients. Specialty pharmacies often have additional patient care services that help the patient manage their therapy more effectively. This study demonstrates that MS patients taking a DMD who are medically managed in a specialty pharmacy setting can achieve lower medical costs. This has significant implications for insurers and patients.

PND8

APPROACH TO MATCHING ALZHEIMER'S DISEASE PATIENTS AND THEIR SPOUSES TO ASSESS CAREGIVER BURDEN IN AN ADMINISTRATIVE CLAIMS DATABASE

Brixner D[1], McAdam-Marx C[1], Perlman D[2], Van Den Bos J[2]
[1]University of Utah, Salt Lake City, UT, USA, [2]Milliman, Inc, Denver, CO, USA

OBJECTIVES: To present a methodology for matching Alzheimer's disease (AD) patients and their spouses to non-AD couples using an administrative claims database to assess caregiver burden. **METHODS:** Data were extracted from MarketScan claims databases from January 1, 2002--December 31, 2008. Patients with an AD ICD-9 diagnosis code and with a spouse in the database were eligible for matching; their index date was the date of first AD diagnosis. Couples with no AD diagnoses were eligible as controls and were matched 1:1 to AD couples based on patient and spouse birth years ± 3 years, index date ± 1 year (defined as eligibility midpoint), gender, and CDPS risk adjuster score prior to index date. All subjects had continuous eligibility 12+ months pre- and post-index date. **RESULTS:** Of 12,476 AD patients with spouses who met all inclusion criteria, 12,370 matched to a control couple. AD couples who did not match often had a greater age difference than available control couples. More AD patients and spouses utilized AD medications, antidepressants, anxiolytics, and antipsychotics pre-index date than their controls ($p < 0.05$). AD patients had a higher pre-index prevalence of non-AD dementia, anxiety, and psychosis than control patients ($p < 0.001$). AD spouses had increased antidepressant use post index ($p < 0.001$); control spouses showed no change. AD patients had a greater increase in total costs post index date than control patients ($p < 0.001$); no difference in total cost was observed between AD and control spouses, whose increases were similar to control patients. **CONCLUSIONS:** Matching on a risk adjuster score resulted in similar rates of chronic conditions between case and control couples but may have limited the ability to detect whether AD impacts spouse health care resource use. However, significant differences in prevalence of dementia and other mental health conditions were noted for AD patients, and an increase in antidepressant use suggests such a trend.

PND9

HEALTH CARE COSTS STRATIFIED BY EPILEPSY SEVERITY IN A US COMMERCIALLY INSURED SETTING

Richy F[1], Banerjee S[2], Makaroff L[2], Bancel C[3], Clark C[3], Gervasoni C[4], Lilliu H[1]
[1]UCB Pharma S.A., Brussels, Belgium, [2]Business & Decision, Brussels, Belgium, [3]UCB Pharma Inc., Atlanta, GA, USA, [4]Keyrus nv, Waterloo, Belgium

OBJECTIVES: To measure health care costs related to epilepsy severity using real-life claims data (Pharmetrics®, IMS, USA) in a representative sample from a U.S. commercially-insured population. **METHODS:** The observation period ranged from January 2006-December 2007. Patients with at least two diagnoses of epilepsy before the observation period and at least two claims for anti-epileptic drugs (AEDs) during the observation period were included. As Pharmetrics® does not report data on disease severity, the number of epilepsy-related emergency room visits over two years (0, 1, 2, ≥3) was used as a proxy. Covariates included age, gender, region, epilepsy-type, number of co-morbidities, concomitant AEDs, and treatment duration. Annualized costs were split into AED medications and non-AED costs. Non-AED costs included non-AED medications and 'other' costs including emergency room visits, hospitalizations, and physician visits. **RESULTS:** A total fo 9163 patients were included, with 14% in the most severe category (≥3 ER visits). Total annualized costs ranged from US$6,000 to $33,000 depending on disease severity. AED costs were not linked to severity; however 'other costs' increased disproportionately with disease severity. In the unadjusted analysis, mean annualized AED, non-AED medication and 'other' costs were $2,513, $1,276 and $2,522, respectively, for those with no ER visits and $3,279, $3,457 and $26,270, respectively, for those with ≥3 ER visits. The rise in 'other' costs with severity was mainly attributable to hospitalization costs. In the adjusted analysis, the difference between AED and 'other' costs increased significantly with epilepsy severity, number of co-morbidities, and age, whereas it decreased with improved AED compliance. **CONCLUSIONS:** Non-AED treatment costs increased disproportionately with epilepsy severity, driven mainly by hospitalization. AED medication costs were not related to disease severity. This analysis suggests cost savings may be achieved through targeted strategies and improvement of patient compliance in cases of severe epilepsy.